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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/827,816	04/06/2001	Magnus Karlsson	TI-32579	6860
23494	7590	09/20/2005	EXAMINER	
TEXAS INSTRUMENTS INCORPORATED			HO, CHUONG T	
P O BOX 655474, M/S 3999			ART UNIT	
DALLAS, TX 75265			PAPER NUMBER	
			2664	

DATE MAILED: 09/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

↓

<b>Office Action Summary</b>	<b>Application No.</b> 09/827,816	<b>Applicant(s)</b> KARLSSON ET AL.	
	<b>Examiner</b> CHUONG T. HO	<b>Art Unit</b> 2664	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>4</u> . | 6) <input type="checkbox"/> Other: ____.  |

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1. Claims 1-20 are pending.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 8-9, 16, 1-2, 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kurdzo et al. (U.S. Patent No. 6,088,365) in view of Hwang (U.S. 2002/0080821).

Regarding to claim 8, see figure 2, col. 4, lines 20-55, Kurdzo et al. a system for interleaving voice packets (AAL2 type (voice)) and signaling and management packets on an asynchronous transfer mode (ATM) connection, system comprises: a digital signal processor (DSP) system having an input for receiving voice communication (see col. 4, lines 50-57) and operably configured to packetize voice communication; comprising:

- A host processor (50, figure 2) operably configured to enable ATM adaption layer (40) signaling and management (see col. 3, lines 25-27, the management processor is provided access to all of the DSPs in the DSP arrays in order to configure the DSPs and obtain status information there from. The DSPs are preferably configured to provide one or more of echo canceling, silent removal, data compression and tone detection) and transmit a corresponding signaling and management packet;

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- A first direct memory access unit (CELL FIFOs, figure 2) having an input for receiving a voice packet fetched from DSP sub-system (DSP array) (see col. 11, lines 35-40);
- A second direct memory access unit (420, figure 2) having an input for receiving a signaling and management packet fetched from host processor (50, figure 2).

However, Kurdzo is silent to disclosing a digital signal processor (DSP) system having an input a voice communication and operably configured to packetize voice communication and appended a corresponding physical phone line identifier.

Hwang , see figure 7, discloses a digital signal processor (DSP) system having an input a voice communication and operably configured to packetize voice communication and appended a corresponding physical phone line identifier (virtual path identifier) (see page 3, [0047] [0048]); a host processor operably configured to enable ATM adaptation layer signaling and management and transmit a corresponding signaling and management packet including a transmit channel identifier (virtual channel identifier) (see page 3,[0047] [0048])

Both Kurdzo and Hwang discloses Asynchronous Transfer Mode module including DSPs and processor. Hwang recognizes a digital signal processor (DSP) system having an input a voice communication and operably configured to packetize voice communication and appended a corresponding physical phone line identifier. Thus, it would have been obvious to one skill in the art at the time of the invention to modify the system of Kurdzo with the teaching of Hwang to provide a digital signal processor (DSP) system having an input a voice communication and operably configured to packetize

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voice communication and appended a corresponding physical phone line identifier in order to interleave the voice, and signaling and management into the AAL2 data stream.

3. In the claims 9, 2, Hwang discloses ATM transmitter is implemented in an AAL2 module (see figure 7).

4. In the claim 16, see figure 2, col. 4, lines 20-55, Kurdzo et al. a system for interleaving voice packets (AAL2 type (voice)) and signaling and management packets on an asynchronous transfer mode (ATM) connection, system comprises: a digital signal processor (DSP) system having an input for receiving voice communication (see col. 4, lines 50-57) and operably configured to packetize voice communication; comprising:

- A host processor (50, figure 2) operably configured to enable ATM adaption layer (40) signaling and management (see col. 3, lines 25-27, the management processor is provided access to all of the DSPs in the DSP arrays in order to configure the DSPs and obtain status information there from. The DSPs are preferably configured to provide one or more of echo canceling, silent removal, data compression and tone detection) and transmit a corresponding signaling and management packet;
- A first direct memory access unit (CELL FIFOs, figure 2) having an input for receiving a voice packet fetched from DSP sub-system (DSP array) (see col. 11, lines 35-40);
- A second direct memory access unit (420, figure 2) having an input for receiving a signaling and management packet fetched from host processor (50, figure 2).

However, Kurdzo is silent to disclosing a digital signal processor (DSP) system having an input a voice communication and operably configured to packetize voice communication and appended a corresponding physical phone line identifier.

Hwang , see figure 7, discloses a digital signal processor (DSP) system having an input a voice communication and operably configured to packetize voice communication and appended a corresponding physical phone line identifier (virtual path identifier) (see page 3, [0047] [0048]); a host processor operably configured to enable ATM adaptation layer signaling and management and transmit a corresponding signaling and management packet including a transmit channel identifier (virtual channel identifier) (see page 3,[0047] [0048])

Both Kurdzo and Hwang discloses Asynchronous Transfer Mode module including DSPs and processor. Hwang recognizes a digital signal processor (DSP) system having an input a voice communication and operably configured to packetize voice communication and appended a corresponding physical phone line identifier. Thus, it would have been obvious to one skill in the art at the time of the invention to modify the system of Kurdzo with the teaching of Hwang to provide a digital signal processor (DSP) system having an input a voice communication and operably configured to packetize voice communication and appended a corresponding physical phone line identifier in order to interleave the voice, and signaling and management into the AAL2 data stream.

5. In the claim 1, see figure 2, col. 4, lines 20-55, Kurdzo et al. a system for interleaving voice packets (AAL2 type (voice)) and signaling and management packets on an asynchronous transfer mode (ATM) connection, system comprises: a digital

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signal processor (DSP) system having an input for receiving voice communication (see col. 4, lines 50-57) and operably configured to packetize voice communication;

comprising:

- A host processor (50, figure 2) operably configured to enable ATM adaption layer (40) signaling and management (see col. 3, lines 25-27, the management processor is provided access to all of the DSPs in the DSP arrays in order to configure the DSPs and obtain status information there from. The DSPs are preferably configured to provide one or more of echo canceling, silent removal, data compression and tone detection) and transmit a corresponding signaling and management packet;
- A first direct memory access unit (CELL FIFOs, figure 2) having an input for receiving a voice packet fetched from DSP sub-system (DSP array) (see col. 11, lines 35-40);
- A second direct memory access unit (420, figure 2) having an input for receiving a signaling and management packet fetched from host processor (50, figure 2).

However, Kurdzo is silent to disclosing a digital signal processor (DSP) system having an input a voice communication and operably configured to packetize voice communication and appended a corresponding physical phone line identifier.

Hwang , see figure 7, discloses a digital signal processor (DSP) system having an input a voice communication and operably configured to packetize voice communication and appended a corresponding physical phone line identifier (virtual path identifier) (see page 3, [0047] [0048]); a host processor operably configured to enable ATM adaptation

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layer signaling and management and transmit a corresponding signaling and management packet including a transmit channel identifier (virtual channel identifier) (see page 3,[0047] [0048])

Both Kurdzo and Hwang discloses Asynchronous Transfer Mode module including DSPs and processor. Hwang recognizes a digital signal processor (DSP) system having an input a voice communication and operably configured to packetize voice communication and appended a corresponding physical phone line identifier. Thus, it would have been obvious to one skill in the art at the time of the invention to modify the system of Kurdzo with the teaching of Hwang to provide a digital signal processor (DSP) system having an input a voice communication and operably configured to packetize voice communication and appended a corresponding physical phone line identifier in order to interleave the voice, and signaling and management into the AAL2 data stream.

6. In the claim 6, Kurdzo discloses first direct memory access unit further operably configured to fetch voice packet from a voice buffer (CELL FIFOs) associated with each digital signal processor in DSP sub-system (DSP array 30) (see figure 2, col.4, lines 39-41, lines 50-57).

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.



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8. Claims 3-5, 7, 10-15, 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combined system (Kurdzo – Hwang) in view of Dighe et al. (U.S. Patent No. 5,717,691).

In the claims 3, 10, 17, the combined system (Kurdzo – Hwang) discloses the limitations of claim 1 above.

However, the combined system (Kurdzo – Hwang) is silent to disclosing a router identifier table having a memory for storing channel pointers, wherein physical line identifier indexes to a particular channel pointer which identifies a transmit channel in a channel state table.

Dighe et al. , see figure 5, (col. 5, lines 22-30) (col. 11, lines 10-15) (see col. 3, lines 7-10) discloses a router identifier table having a memory for storing channel pointers, wherein physical line identifier indexes to a particular channel pointer which identifies a transmit channel in a channel state table; and wherein channel state table having a memory for storing channel information (see col. 10, lines 25-60, col. 11, lines 10-15) for a plurality of transmit channels, channel information including a pointer to a transmit buffer, wherein voice and signaling and management packets identified to a particular transmit buffer are forward to particular transmit buffer for further processing and transmission to a destination port.

Both Kurdzo, Hwang, and Dighe discloses AAL type to process. Dighe recognizes a router identifier table having a memory for storing channel pointers, wherein physical line identifier indexes to a particular channel pointer which identifies a transmit channel in a channel state table. Thus, it would have been obvious to one of

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ordinary skill in the art at the time of the invention to modify the combined system (Kurdzo – Hwang) with the teaching of Dighe to provide a router identifier table having a memory for storing channel pointers, wherein physical line identifier indexes to a particular channel pointer which identifies a transmit channel in a channel state table in order to multiplexing a plurality of physical phone line onto one ATM channel.

9. In the claims 4, 11, 12, Kurdzo et al. discloses a plurality of entries in router identifiers table identifies a particular transmit channel for multiplexing a plurality of physical phone line onto one ATM channel (see figure 2, col.4, lines 39-41, lines 50-57).

10. In the claims 5, 13, 18, 19, Kurdzo et al. discloses logic for forwarding voice and signaling and management packet payloads to particular transmit buffer (see figure 2, col.4, lines 39-41, lines 50-57).

11. In the claims 7, 14, 15, 20, Dighe discloses ATM transmitter is implemented in hardware (col. 5, lines 22-30) (col. 11, lines 10-15) (see col. 3, lines 7-10).

### ***Conclusion***

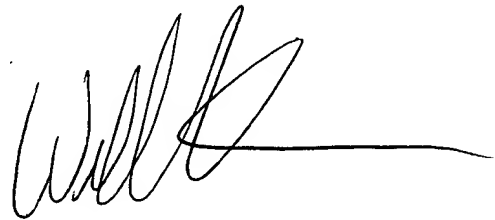
Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHUONG T. HO whose telephone number is (571) 272-3133. The examiner can normally be reached on 8:00 am to 4:00 pm.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

09/17/05



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REVISORY PATENT EXAMINER